

Electrical Permitting Requirements for Low-voltage wiring



Per the N.C. General Statute, a permit and inspections are required for each contractor performing work on any given project within the scope of the State Building codes. For example, if two contractors within the same trade are working on the same job, then each individual contractor is required to obtain a permit for his or her portion of the work.

The electrical point of contact for this action is:

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It is important to note that Mecklenburg County Code Enforcement has continued to operate using the following statutes as a guide when permitting and inspecting any and all electrical work. No changes have been implemented over the past 10 years.

GS153A-357 - Permits

No person may commence or proceed with:

1. The construction, reconstruction, alteration, repair, movement to another site, removal, or demolition of any building;
2. The installation, extension, or general repair of any plumbing system;
3. The installation, extension, alteration, or general repair of any heating or cooling equipment system; or
4. The installation, extension, alteration, or general repair of any electrical wiring, devices, appliances, or equipment without first securing from the inspection department with jurisdiction

over the site of the work each permit required by the State Building Code and any other State or local law or local ordinance or regulation applicable to the work.

The following National Electrical Code (NEC) Articles cover low-voltage wiring:

ARTICLE 411 - Lighting Systems Operating at 30 Volts or less
ARTICLE 640 - Audio Signal Processing, Amplification, and Reproduction Equipment
ARTICLE 645 - Information Technology Equipment
ARTICLE 720 - Circuits and Equipment Operating at Less than 50 Volts
ARTICLE 725 - Class 1, Class 2, and Class 3 Remote-Control, Signaling, and Power-Limited Circuits
ARTICLE 760 - Fire Alarm Systems
ARTICLE 770 - Optical Fiber Cables and Raceways
ARTICLE 800 - Communications Circuits
ARTICLE 810 - Radio and Television Equipment
ARTICLE 820 - Community Antenna Television and Radio Distribution Systems
ARTICLE 830 - Network-Powered Broadband Communications Systems



Electrical Contractor Licensing Requirements

N.C. General Statute 87-43 defines electrical contracting as engaging or offering to engage in the business of installing, maintaining, altering or repairing any electrical work, wiring, devices, appliances or equipment.

Below are the license requirements and license exemption rules directly from the N.C. Board of Examiners of Electrical Contractors at www.ncbeec.org:

License Classification and Scope

There are 10 different classifications of electrical contracting licenses. Each license has a specific scope and limitation of work allowed. The Limited (L), Intermediate (I), and Unlimited (U) classifications allow a licensee to perform residential, commercial and industrial work. The Residential dwelling license (SP-SFD) permits electrical contracting projects pertaining to single-family detached residential dwellings. There are also six special restricted electrical contracting classifications that allow only a limited phase of electrical contracting work: **Low-voltage (SP-LV)**, Elevator (SP-EL), Plumbing, Heating, and Air Conditioning (SP-PH), Groundwater pump (SP-WP), Electric Sign (SP-ES), Swimming Pool (SP-SP).

The scope for each of the special restricted classifications is listed in Section .0800 of the rules and regulations.

.0804. SCOPE OF SP-LV LICENSE

(a) Definition. Low-voltage wiring is defined as:

- (1) wiring systems of 50 volts or less and control circuits directly associated therewith;
- (2) wiring systems that have a voltage in excess of 50 volts and consist solely of power limited circuits meeting the definition of a Class II or Class III wiring system in the National Electrical Code; or
- (3) line voltage wiring that has a voltage no in excess of 300 volts to ground and is installed from the load-side terminals of a disconnecting means or from a junction box, either of which has been installed by others, for the specific purpose of supplying the low-voltage wiring system involved. Some low-voltage wiring systems that meet this definition are exempt under Rule .0805.

(b) Scope. A special restricted low-voltage electrical contracting license authorizes the licensee to install, maintain, or repair only low-voltage wiring and directly related wiring. Wiring is directly related if it:

- (1) originates at the load-side terminals of a disconnecting means or junction box that:
 - (a) has been installed, complete with line-side connections, by others for the specific purpose of supplying the low-voltage wiring system involved; and
 - (b) is permanently and legibly marked to identify the low-voltage wiring system supplied; and
- (2) is not installed in a location considered as hazardous under the National Electrical Code.

Statutory Authority G.S. 87-42; 87-43.3;
Eff. October 1, 1988.

Some low-voltage systems are exempt from the requirement of installation by a licensed electrical contractor. It is that installer's responsibility to contact the N.C. State Board of Examiners of Electrical Contractors to determine whether they meet the requirements of the text below. If the Board determines that no license is required for their system, a letter from the State will need to be issued to the installer stating such, and is to be submitted with the electrical permit application. ***Although a license may not be required, permits and inspections are still required.***

0805. EXEMPTION OF CERTAIN LOW-VOLTAGE WIRING SYSTEMS

(a) **Exemption.** The installation, maintenance or repair of certain low-voltage wiring systems may be performed by those not licensed by the Board if all of the following conditions are met:

- (1) the system is not required by the N.C. State Building Code;
- (2) the low-voltage control circuit and power supply is a Class II or Class III system as defined in the National Electrical Code;
- (3) the system operates at a voltage not in excess of 50 volts or meets the provisions for sound-recording and similar equipment in the National Electrical Code;
- (4) no part of the system is installed in an area considered as hazardous under the National Electrical Code;
- (5) the system is limited or protected by a circuit breaker, fuse or other current limiting device; and
- (6) a failure in the system would not, in the opinion of the electrical inspector having jurisdiction, create a shock or fire hazard to persons or property.

(b) **Rulings.** The Board's executive director shall research the requirements of the N. C. State Building Code, make field investigations of low-voltage wiring systems in question, and issue rulings on whether a low-voltage system meets the above criteria. When the executive director is unable to make a determination, he shall refer the case involved to the Board for a ruling.

Statutory Authority G.S. 87-42; 87-43.3;
Eff. October 1, 1988